



THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 38

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* HANS-GEORG HEINE, RUDOLF SCHOHE-LOOP, THOMAS GLASER,  
JEAN MARIE VIKTOR DE VRY, WOLFGANG DOMPERT  
and HENNING SOMMERMEYER

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Appeal No. 96-0676  
Application 07/963,165<sup>1</sup>

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HEARD: August 2, 1999

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Before PAK, OWENS and LIEBERMAN, *Administrative Patent Judges*.  
OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the examiner's refusal to allow claims 1-9 as amended after final rejection and claim 10 which was added after final rejection. These are all of the claims

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<sup>1</sup> Application for patent filed October 19, 1992.

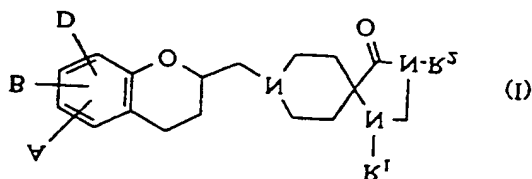
in the application.

### THE INVENTION

Appellants' claimed invention is directed toward triazaspirodecanone-methylchromans having a recited general formula, and to methods for their use in treating diseases of the central nervous system. Claims 1 and 8 are illustrative and read

as follows:

1.  
none-  
of the



Triazaspirodeca  
methylchromans  
general formula

in which

A, B and D are identical or different and represent hydrogen, halogen, cyano, azido, nitro, difluoromethyl, trifluoromethyl, difluoromethoxy, trifluoromethoxy, hydroxyl or carboxyl, or represent straight-chain or branched alkyl, alkenyl, acyl or alkoxy carbonyl each having up to 8 carbon atoms, or represent a group of the formula  $-NR^3R^4$ ,  $-NR^5-L-R^6$  or  $-OR^7$ ,

in which

$R^3$ ,  $R^4$  and  $R^5$  are identical or different and denote hydrogen, straight-chain or branched alkyl having up to 8 carbon atoms, phenyl or benzyl, L denotes the  $-CO-$  or  $-SO_2-$  group,  $R^6$  denotes straight-chain or branched alkyl having

up to 8 carbon atoms or benzyl, or  
denotes aryl having 6 to 10 carbon atoms, which  
is optionally substituted by halogen, hydroxyl,  
nitro, cyano, trifluoromethyl, trifluoromethoxy  
or by straight-chain or branched alkyl or alkoxy  
each having up to 6 carbon atoms,  
R<sup>7</sup> denotes straight-chain or branched alkyl or  
alkenyl each having up to 8 carbon atoms, each of  
which is optionally substituted by cycloalkyl  
having 3 to 6 carbon atoms or phenyl  
or  
A has one of the abovementioned meanings  
and  
R<sup>1</sup> and R<sup>2</sup> are identical or different and  
represent hydrogen or straight-chain or branched  
alkyl, or  
represent phenyl or benzyl, each of which is  
optionally monosubstituted to trisubstituted by  
identical or different substituents from the  
[sic] selected from the group consisting of halogen,  
hydroxyl, cyano, difluoromethyl, difluoromethoxy,  
trifluoromethyl and trifluoromethoxy or by straight-chain  
or branched alkyl or alkoxy each having up to 8  
carbon atoms,  
if appropriate in an isomeric form, and their salts.

8. The method of treating diseases which are  
characterized by disturbances of the serotonergic system  
related to 5 HT<sub>1</sub> receptors in a patient in need thereof which  
comprises administering to such a patient an amount affective  
therefor of a compound or salt thereof according to claim 1.

#### THE REFERENCES<sup>2</sup>

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<sup>2</sup>The examiner cites a number of references in the  
examiner's answer which were not cited in the final rejection  
and are not included in the statement of any rejection in the  
examiner's answer. Appellants have refused to address these  
references, on the ground that they are not relied upon in a  
rejection (reply brief, page 7; supplemental reply brief,

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Huebner 3,759,927 Sep. 18,  
1973

Richard A. Glennon, "Central Serotonin Receptors as Targets for Drug Research", 30 *J. Med. Chem.* 1-12 (Jan. 1987).

#### *THE REJECTIONS*

The claims stand rejected as follows: claims 1-3 and 6-10 under 35 U.S.C. § 112, first paragraph, on the ground that appellants' specification fails to provide an adequate teaching of how to use the claimed compound; claims 1, 6 and 9 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which appellants regard as their invention; and claims 1-9 under 35 U.S.C. § 103 as being obvious over Huebner.

#### *OPINION*

We have carefully considered all of the arguments advanced by appellants and the examiner and agree with

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page 2; second supplemental reply brief, pages 1-2), and the examiner states that none of these references has been applied in any rejection (supplemental answer (paper no. 25, mailed July 17, 1995), page 2; supplemental answer (paper no. 29, mailed April 29, 1997, page 2). Consequently, these references are not before us for consideration.

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appellants that the aforementioned rejections are not well founded. Accordingly, we do not sustain these rejections.

*Rejection under 35 U.S.C. § 112, first paragraph*

Regarding enablement, a predecessor of our appellate reviewing court stated in *In re Marzocchi*, 439 F.2d 220, 223-24, 169 USPQ 367, 369-70 (CCPA 1971):

[A] specification disclosure which contains a teaching of the manner and process of making and using the invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented *must* be taken as in compliance with the enabling requirement of the first paragraph of § 112 *unless* there is reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support. . . .

. . . . .

. . . it is incumbent upon the Patent Office, whenever a rejection on this basis is made, to explain *why* it doubts the truth or accuracy of any statement in a supporting disclosure and to back up assertions of its own with acceptable evidence or reasoning which is inconsistent with the contested statement. Otherwise, there would be no need for the applicant to go to the trouble and expense of supporting his presumptively accurate disclosure.

The examiner argues that compounds which bind to each 5HT<sub>1</sub> subtype of receptor must meet specific structural requirements in order to bind to the receptor (answer, page 4). In support

of this argument, the examiner relies upon Glennon (page 2), which discloses that some compounds have a higher selectivity and/or affinity for one 5-HT site subtype than for another subtype. In the examiner's view, appellants' specification (page 13) enables binding of appellants' compounds only to 5-HT<sub>1A</sub> sites, and not broadly to 5-HT<sub>1</sub> sites (answer, page 4).

Appellants' specification states (page 11, lines 13-16) that the claimed compounds have particularly high affinity for 5-HT<sub>1</sub> receptors, and provides guidance as to dosage amounts of the compounds (page 15, lines 7-12). This disclosure corresponds in scope to the recitation in appellants' claims 6, 8 and 10. The examiner has not explained, and we do not find, why Glennon would have indicated to one of ordinary skill in the art that appellants' claimed compound would not be effective for binding to 5-HT<sub>1</sub> receptors as required by appellants' claims 6, 8 and 10. Thus, the examiner has not carried her burden of providing evidence or technical reasoning which shows that the statements in appellants' specification regarding how to use their claimed compounds are incorrect. Merely referring to an

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article which discloses that some compounds have higher affinity and/or selectivity for one receptor than for another is not sufficient. Moreover, although the claims to which this rejection is applied include appellants' compound claims 1-3 and method claims 7 and 9, the examiner does not explain how the rejection applies to these claims.

For the above reasons, we do not sustain the rejection of claims 1-3 and 6-10 under 35 U.S.C. § 112, first paragraph.

*Rejection under 35 U.S.C. § 112, second paragraph*

The relevant inquiry under 35 U.S.C. § 112, second paragraph, is whether the claim language, as it would have been interpreted by one of ordinary skill in the art in light of appellants' specification and the prior art, sets out and circumscribes a particular area with a reasonable degree of precision and particularity. See *In re Moore*, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971).

The examiner argues that "acyl" is indefinite because it is not clear whether it means RCO- or RSO<sub>2</sub>- (answer, page 5).

"Acyl" has been defined as a radical having the general

formula  $\text{RCO-}$ ,<sup>3</sup> but also has been defined more broadly as including any radical, such as  $\text{RSO}_2\text{-}$ , which is formed from an organic acid by the removal of the hydroxyl group.<sup>4</sup> Regardless of which definition of acyl is used, the examiner has the burden of explaining why, when interpreted by one of ordinary skill in the art in light of appellants' specification and the prior art, the term would cause appellants' claims to fail to set out and circumscribe a particular area with a reasonable degree of precision and particularity. The examiner's assertion that appellants' claims must be limited to the types of radicals disclosed in the specification is not such an explanation.

The examiner argues that "aryl" is indefinite because it is not clear whether it includes heterocyclic aromatic

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<sup>3</sup> *The Condensed Chemical Dictionary* 19 (Van Nostrand Reinhold, 10th ed. 1981); *McGraw-Hill Dictionary of Scientific and Technical Terms* 25 (McGraw-Hill, 2d ed. 1978).

<sup>4</sup> *Hackh's Chemical Dictionary* 18 (McGraw-Hill, 3d ed. 1944).



compounds and

if so, it is not clear how many heteroatoms and they have and how they are bonded (answer, pages 6-7).

The term "aryl" refers to an organic radical derived from an aromatic hydrocarbon by removal of one hydrogen, i.e., a radical having the ring structure characteristic of benzene or the condensed six-carbon rings of the other aromatic derivatives.<sup>5</sup> The examiner has not explained, and it is not apparent, why the definition of this term encompasses heterocyclic aromatic compounds. Furthermore, even if the term were broad enough to include heterocyclic aromatics, the examiner has not explained why the term would have caused appellants' claims to fail to set out and circumscribe a particular area with a reasonable degree of precision and particularity. A claim is not indefinite merely because it is broad. See *In re Gardner*, 427 F.2d 786, 788, 166 USPQ 138, 140 (CCPA 1970). ("Breadth is not indefiniteness."); *In re*

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<sup>5</sup> *The Condensed Chemical Dictionary* 90 (Van Nostrand Reinhold, 10th ed. 1981); *McGraw-Hill Dictionary of Scientific and Technical Terms* 107 (McGraw-Hill, 2d ed. 1978); *Hackh's Chemical Dictionary* 78 (McGraw-Hill, 3d ed. 1944).

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*Borkowski*, 422 F.2d 904, 909, 164 USPQ 642, 645-46 (CCPA 1970).

The examiner questions the meaning of "disturbance" (answer, page 6). As indicated above, the examiner's initial burden is to explain why this term causes appellants' claims, when interpreted by one of ordinary skill in the art in light of appellants' specification and the prior art, to fail to set out and circumscribe a particular area with a reasonable degree of precision and particularity. Merely questioning the meaning of the term is not sufficient for carrying this burden.

For the above reasons, the rejection under 35 U.S.C. § 112, second paragraph, is reversed.

*Rejection under 35 U.S.C. § 103*

Huebner's compounds differ from those of appellants in that Huebner's compounds have a benzofuryl group, wherein the oxygen atom is in a five-membered ring (abstract), whereas in appellants' chromans, the oxygen atom is in a six-membered ring.

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The examiner argues, in reliance upon *In re Lunsford*, 327 F.2d 526, 140 USPQ 425 (CCPA 1964), that ring homologs are *prima facie* obvious when the homologs have the same utility (answer, page 3, incorporating paper no. 3, mailed March 22, 1993, pages 7-9).

Lunsford claimed 3-phenyl-3-pyrrolidyl esters having a recited general formula, and disclosed in his specification that they are useful as antitussives. See *Lunsford*, 327 F.2d at 526, 140 USPQ at 425-26. The primary references disclosed the 4-piperidinol esters which correspond to the claimed compounds, and secondary references disclosed the equivalence, in pharmaceutical compounds, of 4-piperidinols and 3-pyrrolidinols. See *Lunsford*, 327 F.2d at 527, 140 USPQ at 426. The examiner also relied upon the homology of piperidine, a six-membered ring, and pyrrolidine, a five-membered ring, in his determination that the claimed compounds

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would have been *prima facie* obvious to one of ordinary skill in the art over the applied references. See *id.* The court stated that Lunsford's evidence of unexpected results was "sufficient to rebut the obviousness of the claimed compounds over the prior art." *Lunsford*, 327 F.2d at 528, 140 USPQ at 427.

In the present case, unlike *Lunsford*, the examiner relies only upon homology and not upon any evidence of the equivalence, in pharmaceutical compounds, of chromans, which have a six-membered oxygen-containing ring, and benzofurans, which have a five-membered oxygen-containing ring. Hence, *Lunsford* does not adequately support the examiner's position.

For the above reasons, we find that the examiner has not set forth a factual basis which is sufficient to support a conclusion of obviousness of the invention recited in any of appellants' claims. We therefore reverse the rejection under 35 U.S.C. § 103.

Since no *prima facie* case of obviousness has been established, we need not address the experimental results in

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the Glaser declaration (paper no. 16). See *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); *In re Rinehart*, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976).

#### DECISION

The rejections of claims 1-3 and 6-10 under 35 U.S.C. § 112, first paragraph, on the ground that appellants' specification fails to provide an adequate teaching of how to use the claimed compound, claims 1, 6 and 9 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point

out and distinctly claim the subject matter which appellants regard as their invention, and claims 1-9 under 35 U.S.C. § 103 as being obvious over Huebner, are reversed.

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*REVERSED*

CHUNG K. PAK	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
TERRY J. OWENS	)	)
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
	)	
PAUL LIEBERMAN	)	)
Administrative Patent Judge	)	

TJO/pgg

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